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Amendment to the Claims:

Claims 1-27 (Canceled)

28. (Currently amended) A transgenic mouse whose genome comprises a null allele in the endogenous PTP36 ~~allele~~gene~~, wherein said null allele comprises exogenous DNA~~.

29. (Currently amended) The transgenic mouse of claim ~~53~~54, wherein ~~said~~ the female mouse exhibits, relative to a wild-type control mouse, a uterine abnormality comprising uterine dilation.

30. (Currently amended) The transgenic mouse of claim ~~53~~54, wherein the female ~~said~~ mouse exhibits, relative to a wild-type control mouse, a uterine abnormality comprising keratin in the uterine horns.

31. (Currently amended) The transgenic mouse of claim ~~53~~54, wherein the female ~~said~~ mouse exhibits, relative to a wild-type control mouse, a uterine abnormality comprising keratin in the uterine lumen.

32. (Currently amended) The transgenic mouse of claim ~~53~~54, wherein said mouse exhibits, relative to a wild-type control mouse, increased organ weight comprising at least one of the following: increased liver weight, increased spleen weight, increased thymus weight increased liver weight relative to body weight, and increased spleen weight relative to body weight.

Claims 33-36 (Canceled)

37. (Previously presented) A cell or tissue isolated from the transgenic mouse of claim 28.

Claims 38-46 (Canceled)

47. (Previously presented) A method of producing the transgenic mouse of claim 28, the method comprising:

    a. introducing a targeting construct capable of disrupting an endogenous PTP36 allele into a mouse embryonic stem cell;
    b. selecting for the mouse embryonic stem cell that has undergone homologous recombination;
    c. introducing the mouse embryonic stem cell selected for in step (b) into a blastocyst;
    d. implanting the resulting blastocyst into a pseudopregnant mouse, wherein the resultant mouse gives birth to a chimeric mouse; and
    e. breeding the chimeric mouse to produce the transgenic mouse.